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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,257	09/26/2003	James Stewart McCormick	ALC 3408	4907

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EXAMINER

SCIACCA, SCOTT M

ART UNIT	PAPER NUMBER
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2478

NOTIFICATION DATE	DELIVERY MODE
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03/28/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mail@krameramado.com

Office Action Summary	Application No. 10/670,257	Applicant(s) MCCORMICK ET AL.	
	Examiner Scott M. Sciacca	Art Unit 2478	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-20,22-34,36-39 and 41-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-20,22-34,36-39 and 41-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/19/2011</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to communications filed on June 21, 2010.

Claims 1, 13, 17, 33, 34, 39 and 44-46 have been amended. Claims 1-4, 6-20, 22-34, 36-39 and 41-46 are pending in the application.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 21, 2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-20, 22-34, 36-39 and 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaffer (US 5,673,253) in view of Black et al. (US 7,143,153) and Bell et al. (US 5,223,827).

Regarding Claim 1, Shaffer teaches a method of monitoring and diagnosing resource utilization within a connection oriented network made of network elements (*"A network node and a method of dynamically allocating bandwidth for intranodal and internodal telecommunications sessions include monitoring resource utilization at both a line shelf level and a system-wide level"* – See Abstract), at least one of said network elements including a connection resource tracker for maintaining a database of resource utilization (*"The main controller 46 includes utilization-level circuitry 48 which monitors each of the line shelves 12-16 and the switching fabric 36. The circuitry continuously tracks the availability of bandwidth both at the shelf level and at the system-wide level"* – See Col. 5, lines 52-56; *"the memory circuitry may be used to store the utilization thresholds at which bandwidth reallocation is to be triggered"* – See Col. 6, lines 15-17), the method comprising the steps of:

specifying a plurality of resource types for the network elements of the connection oriented network, each resource type being defined by a capacity limit and a utilization (*"Each of the line shelves 12-16 is connected to a switching fabric 36 that routes telecommunications sessions between units 18-22 of the same line shelf, and/or a unit of one line shelf to a unit of a second line shelf, and/or one of the units of FIG. 1 to a unit of a second network node, not shown"* – See Col. 5, lines 27-32; *"a line shelf 12-16 that provides ninety-six channels can service forty-eight voice sessions simultaneously"* – See Col. 5, lines 7-9; *"The switching fabric 36 has a limited capacity with regard to routing of intranodal and internodal sessions. For example, there are limitations with regard to allocation of timeslots, which occur in time division multiplexing*

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or switching, as is well known in the art. Moreover, there are limitations on the capacity of video /voice/data/control transmissions across buses 40, 42 and 44 that link the switching fabric 36 to the individual line shelves 12-16” – See Col. 5, lines 39-47; A plurality of resource types are provided (e.g., line shelf and switch fabric). Each resource has an associated capacity limit (maximum number of simultaneous sessions supported) and a utilization (current number of sessions));

providing a utilization threshold and a specified threshold for each specified type of resource, wherein the utilization threshold is set at a threshold value used to determine whether resources are being over-utilized and the specified threshold is set at a threshold value used to determine whether resources used are exceeding a maximum allowable limit (“As an example, bandwidth reduction of intranodal and/or internodal session may be triggered when a line shelf reaches 98% capacity or when a switching fabric reaches 95% capacity, while bandwidth restoration may require that the capacity levels then fall below 90% utilization” – See Col. 6, lines 32-36; Thus a utilization threshold of 90% is provided that indicates a resource is being over-utilized when it is over 90% capacity. A specified threshold is provided (98% capacity for line shelves and 95% for switching fabric) that indicates a maximum allowable usage limit before bandwidth reductions are performed);

monitoring for receipt of call connection establishment signals (“Optionally, the steps are executed each time a call sequence is initiated for an intranodal or internodal session, which is shown in FIG. 3 as a step 71 of receiving a request for bandwidth allocation” – See Col. 7, lines 7-10);

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measuring the utilization for all resources at the network elements (*“At step 62, data is accumulated regarding the utilization of resources for various times. There may be a learning period in which the historical data of resource utilization is collected for predictive allocation”* – See Col. 6, lines 40-43);

in response to a query from a user relating to a particular type of resource, comparing the utilization for all resources of the particular type as measured in the measuring step with the utilization threshold for said particular type for determining whether the utilization of any resource of said particular type is above the corresponding utilization threshold (*“In step 72, the determination is made as to whether the utilization threshold has been reached for a line shelf. For an internodal session between user units 18-22 that are supported by different line shelves 12-16, the determination is made for both of the involved line shelves”* – See Col. 7, lines 10-15; *“At step 76, the determination is made as to whether an additional call would render the network node susceptible to a system-wide blocking condition. That is, the utilization threshold of the switching fabric 36 and other components that are common to all of the line shelves 12-16 is considered”* – See Col. 7, lines 35-40);

Schaffer does not explicitly teach generating a report and identifying in the report each resource of the particular type for which the utilization is above the corresponding utilization threshold and presenting the report to an operator of said connection oriented network if utilization is above the corresponding utilization threshold for at least one said resource.

However, Black teaches generating a report and identifying in the report each resource of the particular type for which the utilization is above the corresponding utilization threshold and presenting the report to an operator of said connection oriented network if utilization is above the corresponding utilization threshold for at least one said resource (See Col. 173, lines 9-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schaffer to generate reports when thresholds are reached. Motivation for doing so would be to notify a an administrator of network issues as quickly as possible.

Schaffer does not explicitly teach that if the utilization is above the corresponding specified threshold for at least one said resource, checking a timer associated with the resource and when the timer has expired, generating an alarm for the resource and resetting the timer associated with the resource only when the alarm has been generated for the resource.

However, Bell teaches that when a threshold is reached (*"Step 302 tests the new value of COUNT against the present threshold contained in CC"* – See Col. 5, lines 41-43; A utilization level is compared to a threshold), a timer is checked (*"Step 308 tests for an overflow of either CC(J) or TC(J)"* – See Col. 5, line 68 & Col. 6, line 1; *"TC(I) the present time threshold comparison value for this type of event; this variable sets the periodic intervals for each event type"* – See Col. 4, lines 23-25; A timer TC is checked). Bell further teaches that when the timer has expired an alarm is generated and the timer is reset only when the alarm has been generated (*"Step 308 tests for an overflow of*

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either CC(J) or TC(J). If there is no overflow, the program exits. Otherwise, step 310 notifies the network manager 106 of the overflow so that it adjust itself accordingly; step 312 then reinitializes the counters” – See Col. 5, line 68 & Col. 6, lines 1-5; When there is an overflow for TC(J) (i.e., the timer has expired), a network manager is notified (alarm is generated) and TC is reinitialized (reset). Note that the only time the counters are reinitialized is immediately after the network manager notification. Thus, the timer is reset only when an alarm has been generated).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schaffer to generate an alarm for a resource when a timer associated with the resource has expired. Motivation for doing so would be to notify a network manager how often a particular network event occurs by tracking the occurrence of the event with respect to time (See Bell, Col. 1, lines 6-24).

Regarding Claim 2, Schaffer further teaches that the plurality of resource types includes at least one of bandwidth, line card capacity, number of connection end points per line card, Virtual Path Identifier numbers, Virtual Connection Identifier numbers, MultiProtocol Label Switching (MPLS) label numbers, memory within the switch, number of supportable leaf endpoints per system, number of supportable connections in a connecting state, number of MPLS state blocks, and number of connections in a database (*“a line shelf 12-16 that provides ninety-six channels can service forty-eight voice sessions simultaneously”* – See Col. 5, lines 7-9; *“The switching fabric 36 has a limited capacity with regard to routing of intranodal and internodal sessions. For*

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example, there are limitations with regard to allocation of timeslots, which occur in time division multiplexing or switching, as is well known in the art. Moreover, there are limitations on the capacity of video /voice/data/control transmissions across buses 40, 42 and 44 that link the switching fabric 36 to the individual line shelves 12-16” – See Col. 5, lines 39-47).

Regarding Claim 3, Schaffer further teaches that the step of comparing the utilization for all resources is carried out only with respect to resources within a list of resources (*“Moreover, the memory circuitry may be used to store the utilization thresholds at which bandwidth reallocation is to be triggered” – See Col. 6, lines 15-17; Utilization comparisons are carried out only with respect to the list of thresholds stored in memory 58).*

Regarding Claim 4, Black teaches receiving at least one utilization threshold from the operator (See Col. 167, lines 65-67 & Col. 168, lines 1-14).

Regarding Claim 6, Black further teaches the step of generating the report further comprising receiving at least one utilization threshold from the operator (See Col. 167, lines 65-67 & Col. 168, lines 1-14).

Regarding Claim 7, Black further teaches including the utilization of any identified resources in the report (See Col. 169, lines 40-50; i.e., report threshold events to SNMP

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manager, which sends an SNMP trap, which notifies the NMS client, which displays a notice to the user through GUI 895).

Regarding Claim 8, Schaffer further teaches the step of specifying the plurality of resource types further comprising providing a list of resources, the list of resources including at least one of bandwidth, line card capacity, number of connection end points per line card, Virtual Path Identifier numbers, Virtual Connection Identifier numbers, MultiProtocol Label Switching (MPLS) label numbers, memory within the switch, number of supportable leaf endpoints per system, number of supportable connections in a connecting state, number of MPLS state blocks, and number of connections in a database (*“a line shelf 12-16 that provides ninety-six channels can service forty-eight voice sessions simultaneously”* – See Col. 5, lines 7-9; *“The switching fabric 36 has a limited capacity with regard to routing of intranodal and internodal sessions. For example, there are limitations with regard to allocation of timeslots, which occur in time division multiplexing or switching, as is well known in the art. Moreover, there are limitations on the capacity of video /voice/data/control transmissions across buses 40, 42 and 44 that link the switching fabric 36 to the individual line shelves 12-16”* – See Col. 5, lines 39-47), and

the step of generating the report is carried out only with respect to resources within the list of resources (*“Moreover, the memory circuitry may be used to store the utilization thresholds at which bandwidth reallocation is to be triggered”* – See Col. 6,

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lines 15-17; Utilization comparisons are carried out only with respect to the list of thresholds stored in memory 58).

Black teaches receiving at least one utilization threshold from the operator (See Col. 167, lines 65-67 & Col. 168, lines 1-14).

Regarding Claim 9, Bell teaches upon identification of a resource for which the utilization is above the specified threshold, generating an alarm identifying the resource and presenting the alarm to the operator (As shown above with respect to Claim 1, when a threshold is reached, a network manager is notified of the event (an alarm is generated)).

Regarding Claim 10, Black further teaches receiving at least one utilization threshold from the operator (See Col. 167, lines 65-67 & Col. 168, lines 1-14).

Regarding Claim 11, Schaffer further teaches that the step of determining whether the utilization of the resource is above the corresponding utilization threshold and the step of identifying each such resource are carried out repeatedly (*"The steps shown in FIG. 3 may be carried out continuously or periodically. Optionally, the steps are executed each time a call sequence is initiated for an intranodal or internodal session"* – See Col. 7, lines 6-9).

Regarding Claim 12, Schaffer further teaches a step of pausing after the step of identifying each resource for which the utilization is above the corresponding utilization threshold (*"The steps shown in FIG. 3 may be carried out continuously or periodically. Optionally, the steps are executed each time a call sequence is initiated for an intranodal or internodal session"* – See Col. 7, lines 6-9; The steps of Fig. 3, which include identifying resources for which utilization is above the threshold, may be performed periodically, or only when a call sequence is initiated. Thus, there may be a length of time that passes (i.e., a pause) in between successive comparisons of resource utilization levels to their respective thresholds).

Regarding Claim 13, Schaffer teaches that the step of determining whether the utilization of the resource is above the corresponding utilization threshold and the step of identifying each such resource are carried out only upon receipt of a call connection establishment signal (*"The steps shown in FIG. 3 may be carried out continuously or periodically. Optionally, the steps are executed each time a call sequence is initiated for an intranodal or internodal session"* – See Col. 7, lines 6-9).

Regarding Claim 14, Schaffer in view of Black and Bell disclose the invention substantively as described in claim 13. Schaffer, Black and Bell do not explicitly state that an alarm is generated only when an alarm has not been generated since the utilization of the resource last rose above the threshold, however this is a well known technique in order to reduce redundant alarms. By this rationale, "Official Notice" is

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taken that both the concepts and advantages of providing for generating an alarm only when an alarm has not been generated is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to modify the teaching of Schaffer in view of Black and Bell to include alarm suspensions in order to reduce the likelihood of flooding a particular management computer with redundant alarms, thereby reducing overhead processing of the management server as well as reducing bandwidth congestion in the network.

Regarding Claim 15, Black further teaches including the utilization of any identified resources in the report (See Col. 169, lines 40-50; i.e., report threshold events to SNMP manager, which sends an SNMP trap, which notifies the NMS client, which displays a notice to the user through GUI 895).

Regarding Claim 16, Schaffer teaches the step of specifying the plurality of resource types further comprising:

providing a list of resources, the list of resources including at least one of bandwidth, line card capacity, number of connection end points per line card, Virtual Path Identifier numbers, Virtual Connection Identifier numbers, MultiProtocol Label Switching (MPLS) label numbers, memory within the switch, number of supportable leaf endpoints per system, number of supportable connections in a connecting state, number of MPLS state blocks, and number of connections in a database (*"a line shelf 12-16 that provides ninety-six channels can service forty-eight voice sessions*

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simultaneously” – See Col. 5, lines 7-9; “*The switching fabric 36 has a limited capacity with regard to routing of intranodal and internodal sessions. For example, there are limitations with regard to allocation of timeslots, which occur in time division multiplexing or switching, as is well known in the art. Moreover, there are limitations on the capacity of video /voice/data/control transmissions across buses 40, 42 and 44 that link the switching fabric 36 to the individual line shelves 12-16*” – See Col. 5, lines 39-47), and

the step of determining whether the utilization of the resource is above the corresponding utilization threshold is carried out only with respect to resources within the list of resources (“*Moreover, the memory circuitry may be used to store the utilization thresholds at which bandwidth reallocation is to be triggered*” – See Col. 6, lines 15-17; Utilization comparisons are carried out only with respect to the list of thresholds stored in memory 58).

Black teaches receiving at least one utilization threshold from the operator (See Col. 167, lines 65-67 & Col. 168, lines 1-14).

Claims 17-20, and 22-34, 36-39 and 41-46 are rejected for similar reasons as stated above. Furthermore Schaffer discloses that the system can identify resources that are below the corresponding utilization threshold (See Col. 6, lines 32-36).

Response to Arguments

4. Applicant’s arguments with respect to claims 1, 17, 33, 34, 39, 44, 45 and 46 have been considered but are moot in view of the new grounds of rejection.

Conclusion

The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Sciacca whose telephone number is (571) 270-1919. The examiner can normally be reached on Monday thru Friday, 7:30 A.M. - 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott M. Sciacca/
Examiner, Art Unit 2478

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/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2478